

Leopold® Type S Recycled Materials Underdrain

DURABILITY AND REDUCED ENVIRONMENTAL IMPACT FOR WASTEWATER APPLICATIONS

Leopold Type S underdrain made from **Recycled Materials**: Reliable, robust, responsible

At Xylem, we define sustainability as responsible practices that strengthen the environment, the global economy, and society to create a safer and more equitable world.

As an advocate of environmental stewardship and the needs of our customers, we embed sustainability throughout the product lifecycle, including development, manufacture and disposal. We take a holistic view of recycling and waste minimization and apply this philosophy to our products from the outset; at the design stage, we work to create compact, efficient products that use high-recycling-value materials wherever possible.

Green, and committed to quality

The Type S Recycled Materials underdrain (right) meets the same stringent tests as the original Type S underdrain (left) in strength, durability, reliability and performance.

Recycled materials reduce our carbon footprint

The Type S Recycled Materials underdrain is manufactured from post-consumer recycled resins which reduces greenhouse gas emissions by 71% for HDPE. The use of recycled plastic reduces total energy consumption by 88% for HDPE.*

* APR Study Quantifies Benefits of Recycled Resin

Leopold Type S Recycled Materials Underdrain

Materials testing results exceed original underdrain

The Type S and Type S Recycled Materials underdrains were comparatively tested for both short-term and long-term performance, simulating worst-case application scenarios.

Under short-term testing, the recycled HDPE performed the same as the new material in cosmetic, strength, flexural, hardness and chloride exposure testing. The recycled version exceeded the performance of the original material in the tensile test.

In the long-term performance testing, the recycled HDPE passed modulus, rupture, strain and oxidation testing, and exceeded the new material in the UV resistance test.

Ideal for wastewater applications

The Type S Recycled Materials underdrain is ideal for:

- Installations requiring extra-long laterals
- Applications with wide ranges of combined air and water backwash
- Wastewater treatment solids removal and denitrification filters, such as the Leopold elimi-NITE® filtration system

Superior media cleaning

The Type S underdrain design provides superior air scouring and water backwash performance. The dual parallel lateral design and a patented water recovery channel (shown at right) ensure uniform, continuous airflow and even water distribution for thorough cleaning of the filter media. Cleaner media extends filter runs, reduces backwash frequency, and lowers operating costs.



Cost-saving installation

Forgiving level tolerances, along with easy lateral assembly and a Grout-TITE® bridge to prevent grout from entering the flume, means simpler installation and lower construction costs.



Type S Recycled Materials underdrain passes the grouted internal burst strength test



Type S Recycled Materials underdrain passes the downward loading test

Technical data

Material	Recycled HDPE
Length	48 in (122 cm)
Width	11 in (28 cm)
Height	12 in (30 cm)
Weight	25 lbs (11.34 kg)
Maximum lateral length	Center feed: 96 ft (29.3 m) End feed: 48 ft (14.6 m)
Uplift resistance	Up to 15 psi (1 bar)
Standards met	NSF - 61
Airflow range	2 to 6 scfm/ft ² (36 to 110 m/hr)
Water flow	Up to 25 gpm/ft ² (61 m/hr)
Concurrent air/ water flow range	Air: 2 to 5 scfm/ft ² (36 to 91 m/hr) Water: 3 to 8 gpm/ft ² (7 to 20 m/hr)* *depending on lateral length
Water maldistribution	Less than ±5%
Level tolerance	± 0.25 in (6 mm)



In 2016 the World Economic Forum predicted that by 2050, oceans could have more plastic than fish. The amount of plastics that enters landfills and the environment is sufficient to rebuild the currently standing Great Wall of China (with a span of 6000 km) every 12 months.

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Let's Solve Water

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